SERVICE MANUAL

SANYO

STEREO AMPLIFIER

JA 350 (UK)

This is a service manual for model JA 350 (UK) and only items changed from model JA 400 (UK) are indicated.
For other items, refer to Service Manual for model JA 400 (UK, WM-8895).
Δ mark represents a non-interchangeable parts.

Ref: No.	JA 400	JA 350	Description	Remark
	(PACKING & ACCESSORY)			
	141-6-133T-38203	141-6-133T-46001	Individual Carton	Δ
	141-6-410T-80903	141-6-410T-93001	Instruction Manual	Δ
	(CABINET)			
1	141-0-122T-46300	141-0-122T-46301	Front Panel Ass'y	Δ
3	141-2-163T-91900	141-2-163T-91930	Rotary Knob	Δ
4	141-2-163T-81730	141-2-163T-81740	Rotary Knob	Δ
6	141-2-160T-09700	141-2-160T-09701	Push Button	Δ
7	141-2-160T-16500	141-2-160T-16501	Push Button, Power SW	Δ
	(CHASSIS)			
13	141-2-126T-41203	141-2-126T-41208	Back Lid	Δ
	Add	141-2-421T-43900	Special Screw	
	(ELECTRICAL PARTS)			
	Add	4-240T-47673	Socket (Q'ty 12)	
	(GRAPHIC EQUALIZER AMP PCB ASS'Y)			
76	141-4-250T-62103	141-4-250T-62108	PCB Ass'y, Graphic Equalizer Amp.	
	(MAIN AMP PCB ASS'Y)			
77	141-4-250T-62274	141-4-250T-62204	PCB Ass'y, Main Amp	

Add this sheet to Model JA 400 Service Manual.

SANYO ELECTRIC TRADING CO., LTD.

Jul/'83/3000 KA Printed in Japan

SERVICE MANUAL

SANYO

STEREO AMPLIFIER

JA 350A (UK)

This is a service manual for model JA 350A (UK) and only items changed from model JA 400 (UK) are indicated.
For other items, refer to Service Manual for model JA 400 (UK, WM-8895).
⅄ mark represents a non-interchangeable parts.

Ref. No.	JA 400	JA 350	Description	Remark
	(PACKING & ACCESSORY)			
	141-6-133T-38203	141-6-133T-46005	Individual Carton	⅄
	141-6-410T-80903	141-6-410T-93005	Instruction Manual	⅄
	(CABINET)			
1	141-0-122T-46300	141-0-122T-46305	Front Panel Ass'y	⅄
3	141-2-163T-91900	141-2-163T-91930	Rotary Knob	⅄
4	141-2-163T-81730	141-2-163T-81740	Rotary Knob	⅄
6	141-2-160T-09700	141-2-160T-09701	Push Button	⅄
7	141-2-160T-16500	141-2-160T-16501	Push Button, Power SW	⅄
	(CHASSIS)			
13	141-2-126T-41203	141-2-126T-41216	Back Lid	⅄
	Add	141-2-421T-43900	Special Screw	
	(ELECTRICAL PARTS)			
	Add	4-240T-47673	Socket (Q'ty 12)	
	(GRAPHIC EQUALIZER AMP PCB ASS'Y)			
76	141-4-250T-62103	141-4-250T-62108	PCB Ass'y, Graphic Equalizer Amp.	
	(MAIN AMP PCB ASS'Y)			
77	141-4-250T-62274	141-4-250T-62204	PCB Ass'y, Main Amp	

Add this sheet to Model JA 400 Service Manual.

SANYO ELECTRIC TRADING CO., LTD.
33, Hiyoshi-cho 2-chome, Moriguchi-shi,
Osaka-fu, 570, Japan

WM-10620

Aug./'83/3000 KA Printed in Japan

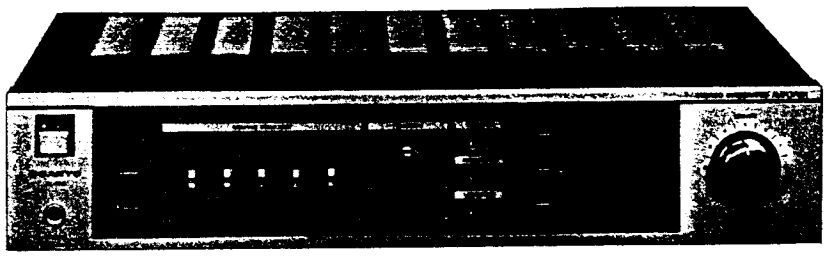
SERVICE MANUAL

POWER AMPLIFIER

SANYO

JA 400

(U K)



For Service Manuals Contact
MAURITRON TECHNICAL SERVICES
8 Cherry Tree Rd, Chinnor
Oxon OX9 4QY
Tel:- 01844-351694 Fax:- 01844-352554
Email:- enquiries@mauritron.co.uk

SPECIFICATIONS

Continuous output power	35W x 2 (at 8 ohms, 0.07% distortion)
Total harmonic distortion	0.04% (30W output, 8 ohms)
Input sensitivity and inpedance	
PHONO	2.5mV/47k ohms
AUX/TUNER/TAPE PLAY	150mV/47k ohms
Phono overload level	130mV RMS (at 1kHz)
Output level	
TAPE REC	150mV
Frequency response	20 – 20000 Hz (AUX) (± 1.0 dB)
Graphic equalizer controls	±10dB (63/250/1000/4000/16000 Hz)
High filter response	7kHz (–6dB/oct.)
Loudness control response	
100Hz/10kHz	+8dB / +4dB
Signal to noise ratio	90 dB (AUX)
Power requirements	AC: 240V, 50 Hz
Power consumption	170W
AC output socket	AC: 18V, 300mA (max.)
Dimensions (Approx.)	420 (W) x 220 (D) x 85 (H) mm
	(16-1/2" x 8-5/8" x 3-3/8")
Weight (Approx.)	5 kg (11 lbs.)

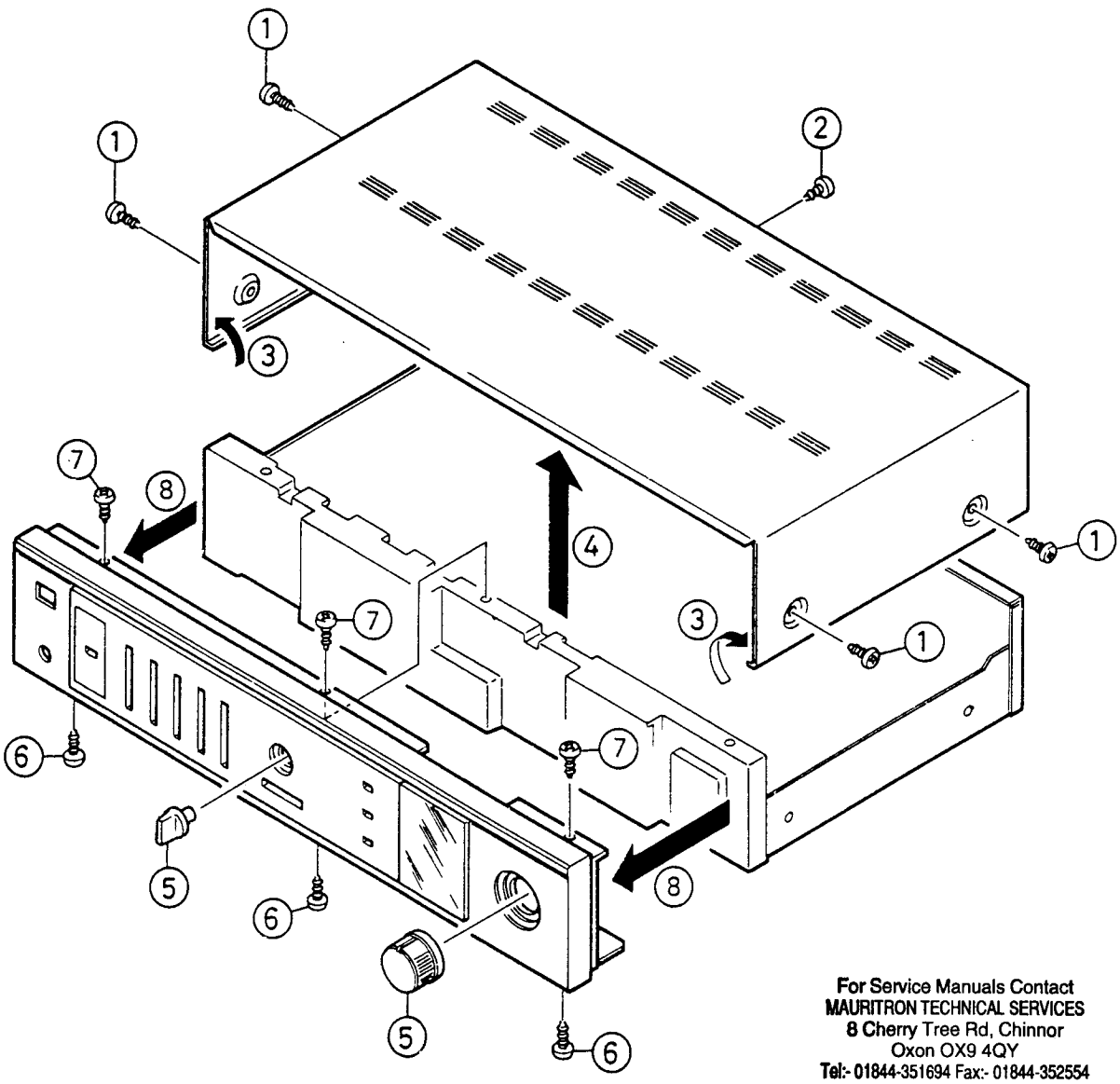
* Specifications subject to change without notice.

DISMOUNTING OF CABINET AND FRONT PANEL

- Perform disassembly of amplifier after removing the power supply cord with out fail.
- Revove parts in order of disassembly as numbered.

1. **TO DISMOUNT CABINET**
   (1). Take out total 4 screws (Binding head tapping 4 x 8mm 1) from cabinet.
   (2). Take out 1 screw (Binding head tapping 3 x 6mm 2) from cabinet.

2. **TO DISMOUNT FRONT – PANEL**
   (1). Remove volume control knob and function select knob.
   (2). Take out total 3 screws (Binding head tapping 3 x 12mm 6) from front panel.
   (3). Take out total 3 screws (Binding head tapping 3 x 10mm 7) from front panel.



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ADJUSTMENT OF BIAS

CONDITIONS

VOLUME	:	minimum	MONITOR		: source
BALANCE	:	center	HIGH FILTER		: off
GRAPHIC EQUALIZER	:	center	LOUDNESS		: off
			FUNCTION		: aux
			SPEAKERS	A	: on
				B	: off

1. BIAS CURRENT ADJUSTMENT (No-Input, No-Load)

After the power switch is turned on, adjust SVR701 and SVR801 respectively as follows.

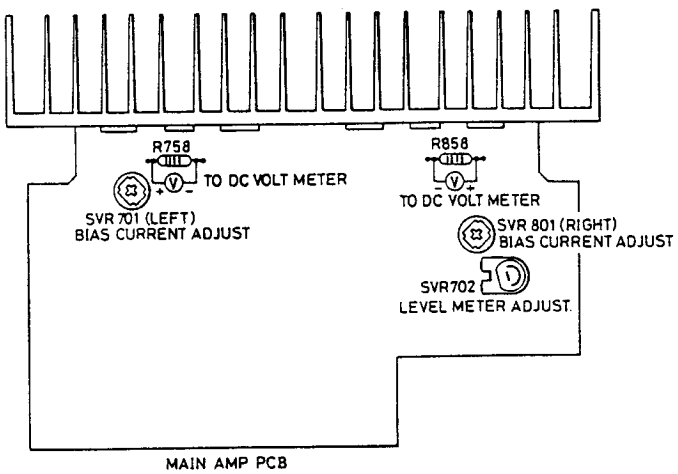
L – Channel : SVR701 for 4 ±1mV reading beteen the both leads of R758.

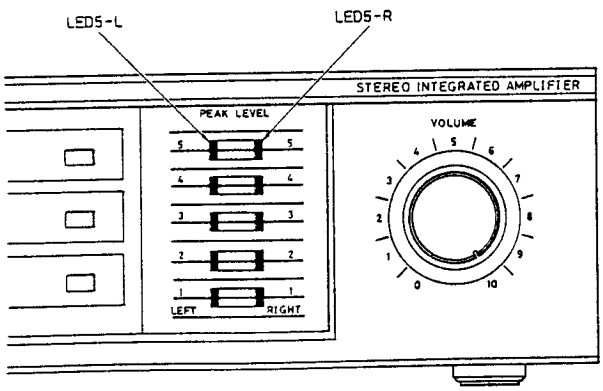
R – Channel : SVR801 for 4 ±1mV reading beteen the both leads of R858.

2. LEVEL METER ADJUSTMENT

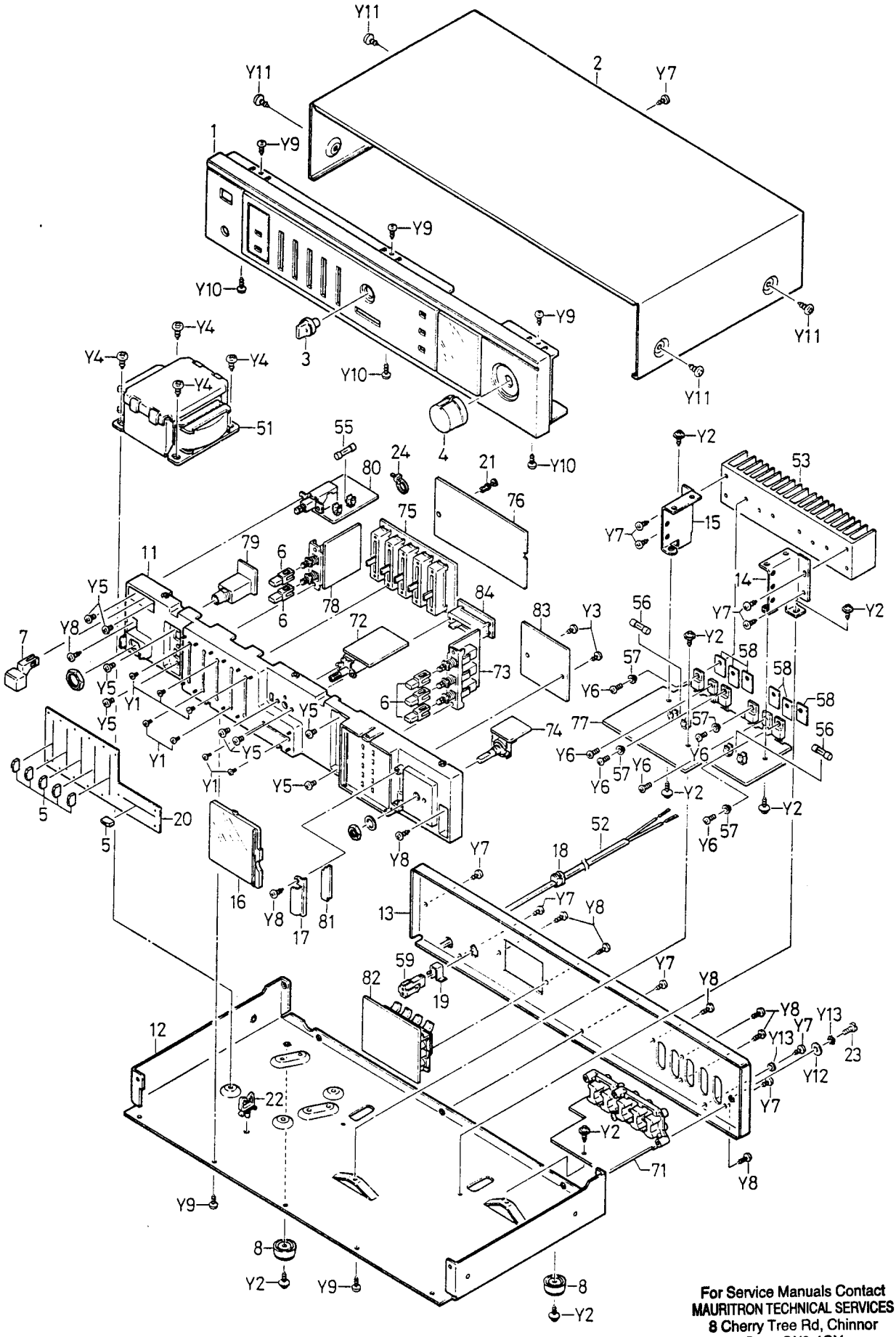
(1) Connect a 8 ohm load to the speaker terminals.
(2) Input 1 kHz sine wave to the AUX terminals by means of an oscillator.
(3) Set the main volume in the maximum position, and adjust the attenuator of oscillator so that 3.8V output voltage is applied to the load.
(4) Turn the main volume counterclockwise until the 5th right channel LED of LEVEL METER (LED5–R) lights up faintly.
(5) Adjust SVR702 so that the 5th left channel LED (LED5–L) lights up in the same way as the 5th right channel LED (LED5–R).

PART SOCATION





EXPLODED VIEW



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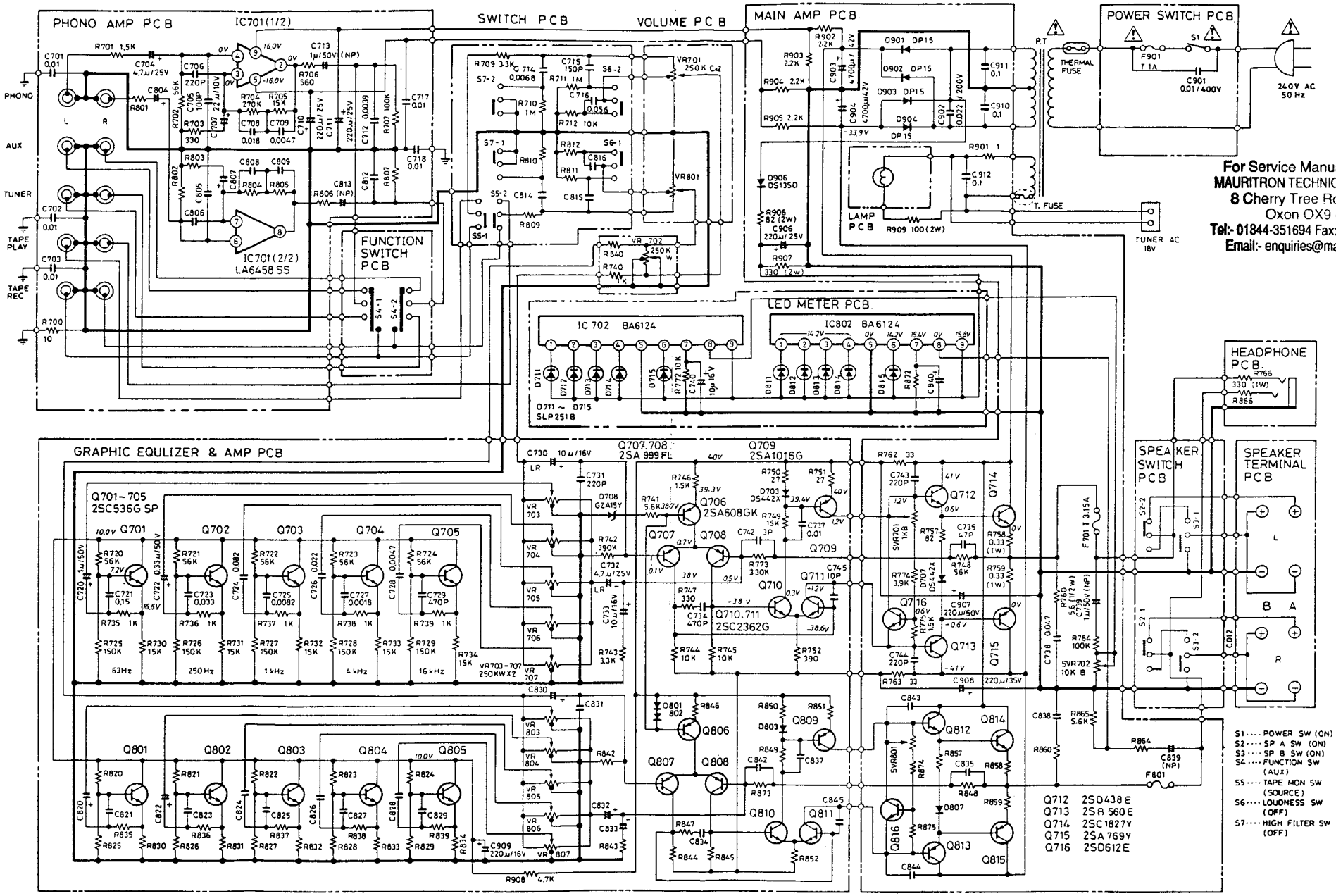
Ref. No.	Part No.	Description	Q'ty
PACKING & ACCESSORY			
	141-6-133T-38203	Individual Carton	1
	141-6-144T-85000	Foam Plastic Case	2
	141-6-331T-11600	Protector Sheet	1
	141-6-231T-35601	Inner Polye Cover	1
	141-6-410T-80903	Instruction Manual	1
CABINET			
1	141-0-122T-46300	Front Panel Ass'y	1
2	141-2-111T-54901	Cabinet	1
3	141-2-163T-91900	Rotary Knob	1
4	141-2-163T-81730	Rotary Knob	1
5	141-2-164T-30700	Slide Knob	6
6	141-2-160T-09700	Push Button	5
7	141-2-160T-16500	Push Button, POWER SW	1
8	141-2-174T-11200	Stand	2
CHASSIS			
11	141-2-311T-42900	Chassis	1
12	141-2-125T-29600	Bottom Lid	1
13	141-2-126T-41203	Back Lid	1
14	141-2-310T-68400	Bracket, Heat Sink, Right	1
15	141-2-310T-68500	Bracket, Heat Sink, Left	1
16	141-2-143T-92600	Marking Plate	1
17	141-2-329T-08700	Reflector	1
18	141-2-464T-11400	Fixer, AC Cord	1
19	141-2-310T-69700	Bracket	1
20	141-2-135T-86702	Cover	1
21	141-2-464T-40500	Fixer	1
22	141-2-464T-29900	Fixer	1
23	141-2-421T-28800	Special Screw	1
24	141-2-464T-20600	Fixer	5
FIXING PARTS			
Y 1		Pan Hd. Screw 2 x 4mm	7
Y 2		Pan. Hd. Tapping Screw W/Washer 3 x 6mm	8
Y 3		Pan. Hd. Tapping Screw W/Washer 3 x 8mm	2
Y 4		Pan. Hd. Tapping Screw W/Washer 4 x 8mm	4
Y 5		Binding Hd. Screw 3 x 6mm	8
Y 6		Binding Hd. Screw 3 x 8mm	6
Y 7		Binding Hd. Tapping Screw 3 x 6mm	10
Y 8		Binding Hd. Tapping Screw 3 x 8mm	9
Y 9		Binding Hd. Tapping Screw 3 x 10mm	5
Y10		Binding Hd. Tapping Screw 3 x 12mm	3
Y11		Binding Hd. Tapping Screw 4 x 8mm	4
Y12		Spring Washer 3 x 10 x 1t	1
Y13		External Tooth Lock Washer 3 x 6.5t x 0.45t	2
ELECTRICAL PARTS			
51	4-300T-60900	Power Transformer	1
52	4-243T-85273	Power Cord	1
53	141-2-368T-26200	Heat Sink	1
55	4-234T-10584	Fuse, 2A (F901)	1
56	4-234T-10589	Fuse, 2.5A (F701,801)	2
57	141-2-243T-09800	Base	4
58	141-2-327T-26100	Insulator	6
59	4-240T-16571	Socket	1

Ref. No.	Part No.	Description	Q'ty
PHONO AMP P. C. B. ASS'Y			
71	141-4-250T-61601	P.C.B. Ass'y, Phono Amp	1
	4-240T-06900	Socket, 4p RCA	1
	4-240T-07000	Socket, 6p RCA	1
IC701		IC LA6458SS	1
	CAPACITORS		
C704,804		Electrolytic 4.7μF 25V	2
C713,813		Electrolytic 1μF (Nonpolar) 50V	2
C710,711		Electrolytic 220μF 25V	2
C707,807		Electrolytic 22μF 10V	2
C708,808		Mylar 0.018μF ±5% 50V	2
C709,809		Mylar 0.0047μF ±5% 50V	2
C712,812		Mylar 0.0039μF ±10% 50V	2
C706,806		Ceramic 220pF ±10% 50V	2
C705,805		Ceramic 100pF ±10% 50V	2
C702,703, 701		Ceramic 0.01μF +80—20% 50V	3
C717,718		Ceramic 0.01μF ±10% 50V	2
	RESISTORS All Resistors are Carbon T-type ±5% ¼W, unless otherwise noted.		
R703,803		330 ohm	2
R706,806		560 ohm	2
R701,801		1.5K ohm	2
R705,805		15K ohm	2
R702,802		56K ohm	2
R707,807		100K ohm	2
R704,804		270K ohm	2
R700		10 ohm	1
FUNCTION SWITCH P. C. B. ASS'Y			
72	141-4-250T-61771	P.C.B. Ass'y, Function Switch	1
S4	4-238T-56000	Rotary Switch	1
SWITCH P. C. B. ASS'Y			
73	141-4-250T-61871	P.C.B. Ass'y, Switch	1
S5,6,7	4-238T-56100	Push Switch	1
	CAPACITORS		
C716,816		Mylar 0.056μF ±10% 50V	2
C714,814		Mylar 0.0068μF ±10% 50V	2
C715,815		Ceramic 150pF ±10% 50V	2
	RESISTORS		
R710,711, 810,811		1M ohm	4
R712,812		10K ohm	2
R709,809		1.3K ohm	2
VOLUME P. C. B. ASS'Y			
74	141-4-250T-61971	P.C.B. Ass'y, Volume	1
VR701,801	4-220T-03400	Variable Resistors	1
GRAPHIC EQUALIZER CONTROL P. C. B. ASS'Y			
75	141-4-250T-62071	P.C.B. Ass'y, Graphic Equalizer Control	1
VR703,704, 705,706,707	4-220T-03500	Variable Resistor	5
	CAPACITORS		
C720,820		Electrolytic 1μF 50V	2
C722,822		Electrolytic 0.33μF 50V	2
C724,824		Mylar 0.082μF ±10% 50V	2
C726,826		Mylar 0.022μF ±10% 50V	2
C728,828		Mylar 0.0047μF ±10% 50V	2

Ref. No.	Part No.	Description	Q'ty
GRAPHIC EQUALIZER AMP P. C. B. ASS'Y			
76	141-4-250T-62103	P.C.B. Ass'y, Graphic Equalizer Amp	1
Q709,809		Transistor 2SA1016	2
Q710,711, 810,811		Transistor 2SC2362	4
Q706,806		Transistor 2SA608K	2
Q701,702, 703,704, 705		Transistor 2SC536 AUD SP	5
Q801,802, 803,804, 805		Transistor 2SC536 AUD SP	5
Q707,708, 807,808		Transistor 2SA999 NF	4
D703,801, 802,803		Diode DS442X	4
D708		Zener Diode GZA15	1
	CAPACITORS		
C909		Electrolytic 220μF 16V	1
C733,833		Electrolytic 10μF 16V	2
C730,830		Electrolytic 10μF 16V	2
C732,832		Electrolytic 4.7μF 25V	2
C721,821		Mylar 0.15μF ±10% 50V	2
C723,823		Mylar 0.033μF ±10% 50V	2
C725,825		Mylar 0.0082μF ±10% 50V	2
C727,827		Mylar 0.0018μF ±10% 50V	2
C729,829		Mylar 470pF ±10% 50V	2
C734,834		Mylar 470pF ±10% 50V	2
C737,837		Mylar 0.01μF ±10% 50V	2
C731,831		Ceramic 220pF ±10% 50V	2
C742,842		Ceramic 3pF ±10% 50V	2
C745,845		Ceramic 10pF ±10% 50V	2
	RESISTORS All Resistors are Carbon T-type ±5% ¼W, unless otherwise noted.		
R752,852		FP-Carbon 390 ohm P-type	2
R908		FP-Carbon 4.7K ohm P-type	1
R749,849		15K ohm	2
R742,842		390K ohm	2
R725,726, 727,728, 729		150K ohm	5
R825,826, 827,828 829		150K ohm	5
R720,721, 722,723, 724		56K ohm	5
R820,821, 822,823, 824		56K ohm	5
R730,731, 732,733, 734		15K ohm	5
R830,831, 832,833, 834		15K ohm	5
R744,745, 844,845		10K ohm	4
R735,736, 737,738, 739		1K ohm	5
R835,836, 837,838, 839		1K ohm	5
R746,846		1.5K ohm	2
R747,847		330 ohm	2
R750,751, 850,851		27 ohm	4
R773,873		330K ohm	2
R743,843		3.3K ohm	2
R741,		5.6K ohm	1

Ref. No.	Part No.	Description	Q'ty
MAIN AMP P. C. B. ASS'Y			
77	141-4-250T-62274	P.C.B. Ass'y, Main Amp	1
	141-2-381T-04200	Bracket Fuse	4
SVR701,801	4-222T-73573	Semi-Variable Resistor 1K ohm	2
SVR702	4-222T-97575	Semi-Variable Resistor 10K ohm	1
	4-240T-11271	Socket, 4p	1
Q714,814		Transistor 2SC1827	2
Q715,815		Transistor 2SA769	2
Q712,812		Transistor 2SD438	2
Q713,813		Transistor 2SB560	2
Q716,816		Transistor 2SD612	2
D707,807		Diode DS442 X	2
D901,902		Diode GP15D	4
903,904			
D906		Diode DS135	1
	CAPACITORS		
C903,904	4-163T-10200	Electrolytic 4700μF 42V	2
C907,908		Electrolytic 220μF 50V	2
C906		Electrolytic 220μF 25V	1
C739,839		Electrolytic 1μF (Nonpolar) 50V	2
C902	4-223T-13771	Capacitor 0.022μF ±20% 200V	1
C738,838		Mylar 0.047μF ±10% 50V	2
C910,911		Mylar 0.1μF ±20% 100V	2
C912		Ceramic 0.1μF ±10% 50V	1
C735,835		Ceramic 47pF ±10% 50V	2
C743,744, 843,844		Ceramic 220pF ±10% 500V	4
	RESISTORS All Resistors are Carbon T-type ±5%, ¼W unless otherwise noted.		
R758,759, 858,859		Metal 0.33 ohm P-type 1W	4
R760,860		FP-Carbon 5.6 ohm P-type ½W	2
R901		FP-Carbon 1 ohm P-type	1
R757,857		FP-Carbon 82 ohm P-type	2
R762,763		FP-Carbon 33 ohm P-type	2
R906		Metal 82 ohm P-type 2W	1
R909		Metal 100 ohm P-type 2W	1
R748,848		56K ohm	2
R764,864		100K ohm	2
R903,904		2.2K ohm	2
R775,875		1.5K ohm	2
R774,874		3.9K ohm	2
R865		5.6K ohm	1
R907		Metal 330 ohm P-type 2W	1
R902,905		FP-Carbon 2.2K ohm P-type	2
SPEAKER SWITCH P. C. B. ASS'Y			
78	141-4-250T-62372	P.C.B. Ass'y, Speaker Switch	1
S-2,S-3	4-238T-56200	Switch	1
HEADPHONE P. C. B. ASS'Y			
79	141-4-250T-62471	P.C.B. Ass'y, Headphone	1
	4-240T-29971	Socket	1
R766,866		Metal 330 ohm P-type 1W	2
AC POWER SWITCH P. C. B. ASS'Y			
80	141-4-250T-62501	P.C.B. Ass'y, AC Power Switch	1
S1	4-238T-30100	Switch, Power	1
C901	4-222T-12100	Capacitor 0.01μF 400V	1
	141-4-381T-04200	Bracket Fuse	2
	141-2-382T-18900	Terminal	2

SCHEMATIC DIAGRAM



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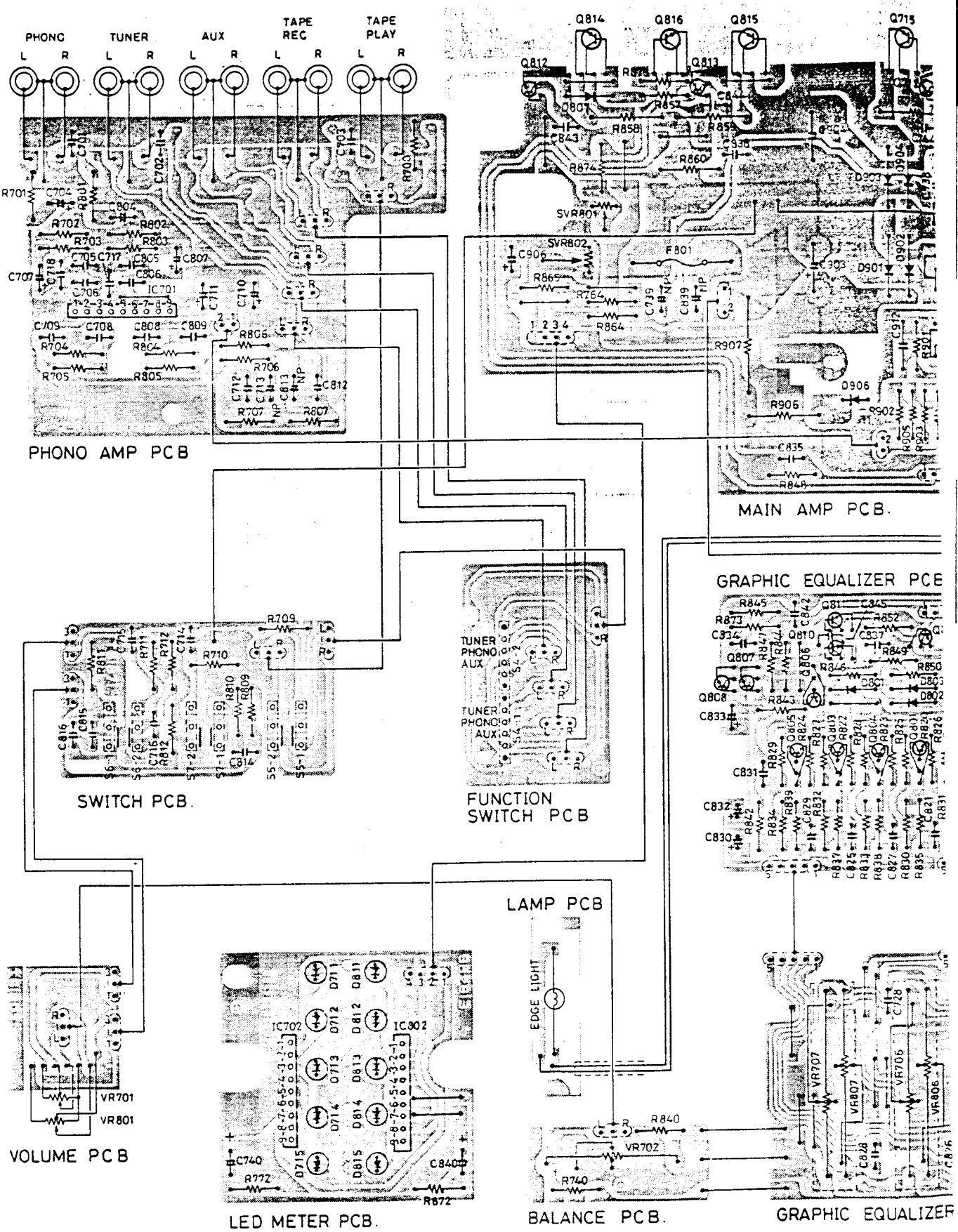
WIRING DIAGRAM



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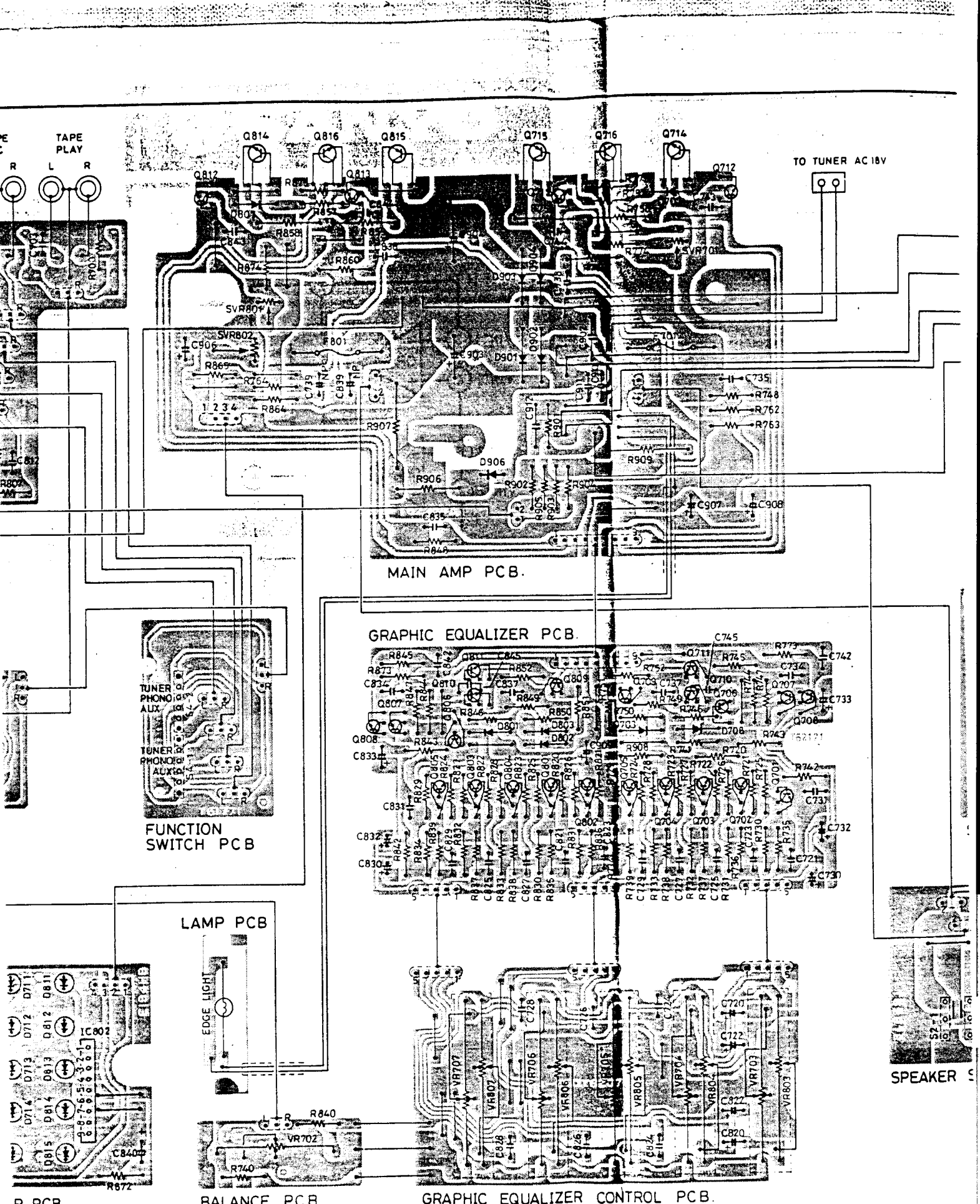
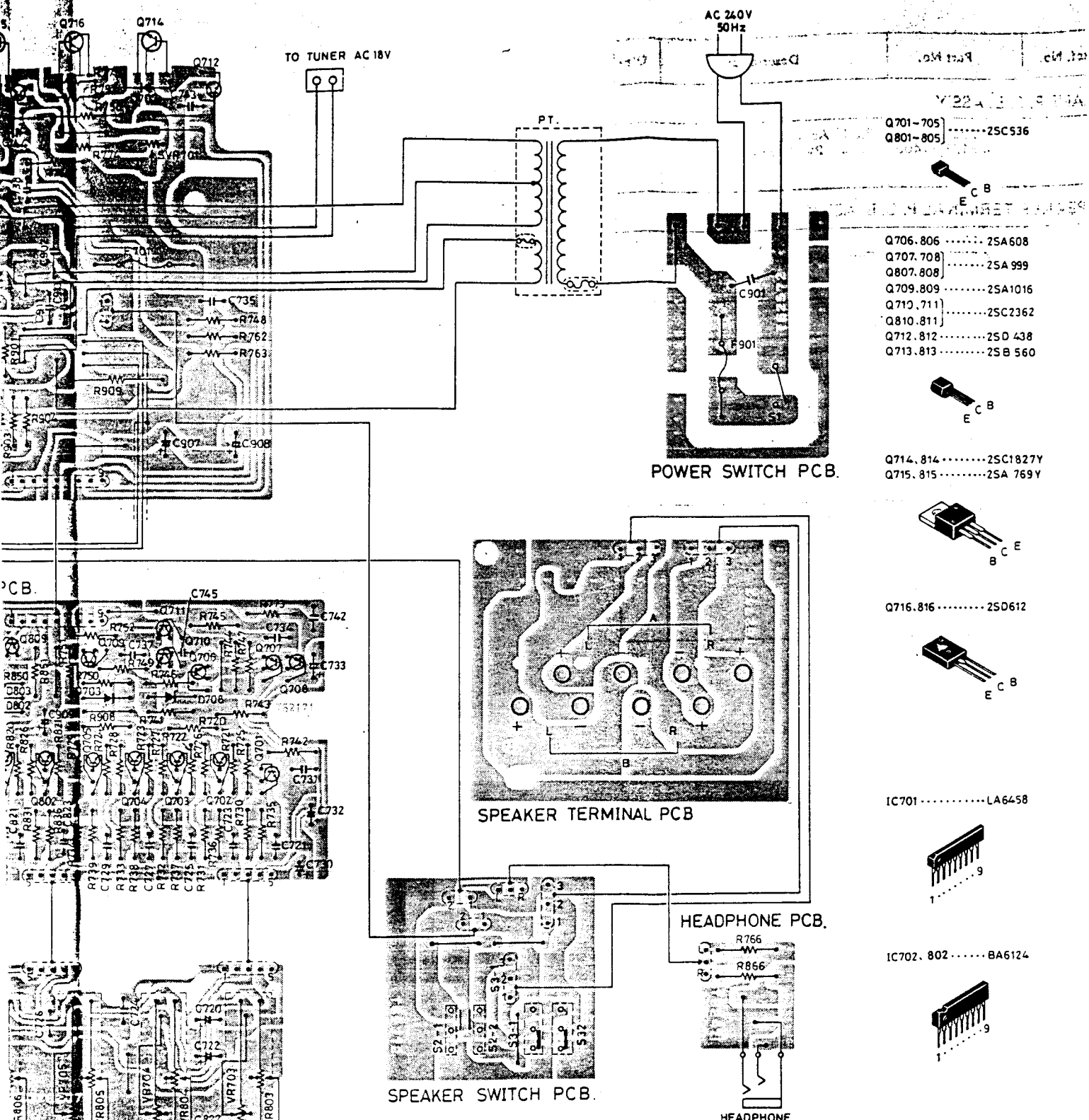

TAPE PLAY
R L R
TO TUNER AC 18V
MAIN AMP PCB.
GRAPHIC EQUALIZER PCB.
FUNCTION SWITCH PCB
LAMP PCB
EDGE LIGHT
BALANCE PCB.
GRAPHIC EQUALIZER CONTROL PCB.
SPEAKER
R PCB.



Q701~705, Q801~805 ····· 2SC536

Q706, 806 ····· 2SA608
Q707, 708, Q807, 808 ····· 2SA 999
Q709, 809 ····· 2SA1016
Q710, 711, Q810, 811 ····· 2SC2362
Q712, 812 ····· 2SD 438
Q713, 813 ····· 2SB 560

Q714, 814 ····· 2SC1827Y
Q715, 815 ····· 2SA 769Y

Q716, 816 ····· 2SD612

IC701 ····· LA6458

IC702, 802 ····· BA6124

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PARTS LIST

Ref. No.	Part No.	Description	Q'ty
LAMP P. C. B. ASS'Y			
81	141-4-250T-62671 4-612T-17400	P.C.B. Ass'y, Lamp Lamp 12V, 100mA	1 1
SPEAKER TERMINAL P. C. B. ASS'Y			
82	141-4-250T-62701 4-237T-09871	P.C.B. Ass'y, Speaker Terminal Terminal Board	1 1
LED METER P. C. B. ASS'Y			
83 IC702,802 IC702,802 D711～715, D811～815 C740,840 R722,872	141-4-250T-64500	P.C.B. Ass'y, LED Meter IC LB1403)or IC BA6124)or LED SLP251B Green Electrolytic 10μF 16V Carbon 10K ohm P-type ¼W	1 2 2 10 2 2
BALANCE P. C. B. ASS'Y			
84 VR702 R840 R740	141-4-250T-64671 4-220T-03600	P.C.B. Ass'y, Balance Variable Resistor Carbon 1K ohm T-type ¼W Carbon 1K ohm P-type ¼W	1 1 1 1

For Service Manuals Contact
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Oxon OX9 4QY
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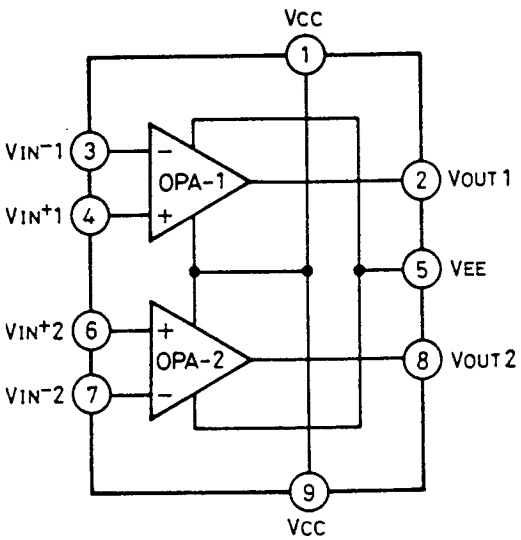
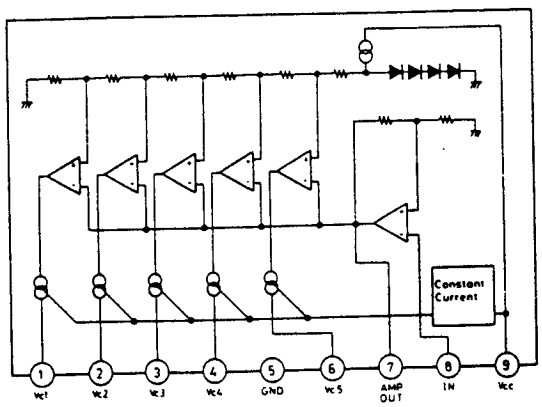
C BLOCK DIAGRAM

LA 6458S (Dual Operation Amplifier)



BA6124 (LED Level Meter)



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